



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

Qualification Code : 071606T4MCT
Qualification : Mechatronics Technician Level 6
Unit Code : ENG/OS/MC/CC/01/6
Unit of Competency : Prepare and Interpret Technical Drawing

WRITTEN ASSESSMENT

INSTRUCTIONS TO CANDIDATE

1. You have **THREE** hours to answer all the questions.
2. Marks for each question are indicated in the brackets.
3. The paper consists of **TWO** sections: A and B.
4. Do not write on the question paper.
5. A separate answer booklet will be provided.

SECTION A: (40 MARKS)

1. Outline the procedure for drawing an isosceles triangle given the perimeter and the altitude (4 marks)
2. What is the procedure for constructing a parallelogram given two sides and an angle? (4 marks)
3. State three different sizes of drawing papers used in technical drawing? (3 marks)
4. List two differences between oblique and isometric drawing? (4 marks)
5. Identify **four** features which are not sectioned in an object when cut longitudinally during sectioning? (4 marks)
6. Outline any four items of information that is contained in the title block? (4 marks)
7. Name two types of pencils used in drawing and their purpose? (4 marks)
8. Identify and describe two methods of dimensioning in technical drawing (4 marks)
9. List any four tools used to manipulate a drawing in CAD (4 marks)
10. Define the following terms (3 marks)
 - i. A circle
 - ii. Concentric circles
 - iii.** Eccentric circles
11. State any two scales used in technical drawing (2 marks)

SECTION B: (60 MARKS)

*Answer any **THREE** questions in this section*

12.

- a. Describe the procedure and hence construct a regular heptagon whose side is 40mm
(12 marks)

- b. Divide a line AB 120 mm long into seven equal parts. (8 marks)

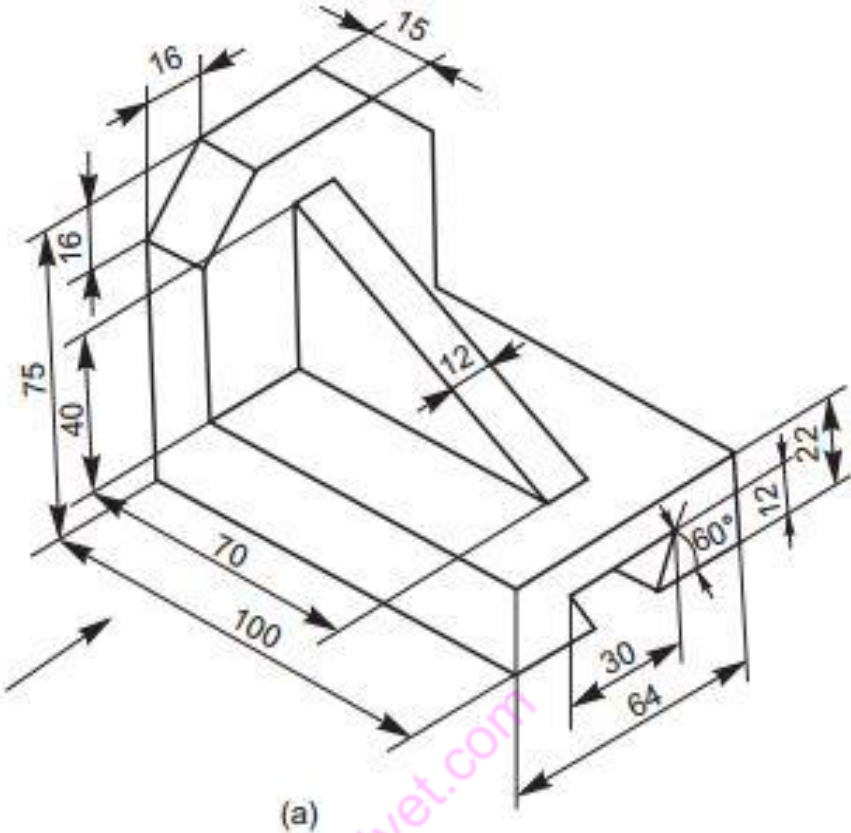
13.

- a. Describe the procedure and construct a triangle similar to another triangle but with a different perimeter (15 marks)

- b. Outline the procedure and construct a parallelogram given two sides and an angle
(5 marks)

14. On A3 size drawing paper, using drawing instruments draw in first angle projection the views of the block given in figure below as follows: (20 marks)

- a) Front elevation in the direction of arrow E;
- b) End elevation in the direction of arrow H;
- c) Plan.



15. The figure below shows the three views of a shaped block. On A3 size drawing paper and using drawing instruments draw the block in isometric projection and give 5 major dimensions. (20 marks)

